

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO
PROCEEDING NO. 18F-0866E

DELTA-MONTROSE ELECTRIC ASSOCIATION, COMPLAINANT, V. TRI-STATE
GENERATION AND TRANSMISSION ASSOCIATION, INC., RESPONDENT

COMMENTS OF LARRY MILOSHEVICH
RELEVANT CONTEXT AND TWO POINTED QUESTIONS

1. INTRODUCTION

Larry Miloshevich is an Independent Advocate with a technical background in atmospheric science and geophysical engineering, with broad knowledge of energy and climate science. He has submitted filings in several PUC dockets¹, both independently as here, and on behalf of Energy Freedom Colorado². He has written a white paper entitled "*A Strategy and Six Ways to Address Community Energy Goals*", which includes a review of challenges facing Tri-State and its member co-ops [1, sec. 4].

The purpose of this filing is to complement the legal arguments presented by the formal participants in this proceeding, by adding context and background that seems relevant to the Commission's decision. This filing aims to illuminate "the forest" as this proceeding will generally focus on "the trees."

It would be difficult to argue against the reasonableness of DMEA's desire to procure wholesale energy for its customer-members that is:

- much cheaper than members currently pay Tri-State;
- much cleaner than Tri-State's coal-heavy energy mix; and

¹ 16I-0816E (Mountain West/SPP); 16A-0396E (Xcel ERP); 17M-0694E (Pre-rulemaking); 18M-0080E (Transmission planning); 19R-0096E (Rulemaking).

² Energy Freedom Colorado is a nonprofit, volunteer group that researches and advocates competition and consumer choice in the electricity sector. <http://EnergyFreedomCO.org/>

- increasingly produced locally in order to foster local economic development and jobs, and keep energy dollars circulating locally.

A growing number of member co-ops object to Tri-State's resistance to change as the energy landscape evolves, forcing members to continue buying energy that is both expensive (far above market prices) and dirty (dominated by uneconomic coal plants) [2]. These conditions suppress local economic development and attractiveness to businesses [3], and threaten a downward economic spiral across Tri-State territory.

As to the basic question at hand – should DMEA be allowed to exit its Tri-State contract at a just, reasonable and non-discriminatory cost – the answer is clearly 'yes.' Among other reasoning, the precedent of Kit Carson co-op's exit at a cost of \$37M [4,5,6] demonstrates Tri-State's own conclusion that: 1) an exit is contractually allowed; and 2) a mutually-acceptable (and therefore just and reasonable) exit charge for DMEA would be, in some appropriate way, proportional to \$37M.

One possible outcome of this proceeding is a narrow decision that establishes a reasonable exit charge for DMEA. Another possible outcome is a broader remedy that would provide a template that other co-ops could follow if they so choose. The ongoing clean energy transition is being driven by energy economics, state policies, and societal imperatives, and these forces provide the underlying motivation for DMEA and other members to seek change or seek an exit from Tri-State. These pressures will almost certainly continue and increase, and this issue will likely return to the PUC in the near future unless a broad decision is reached. The cost of renewable energy will continue to decline relative to the operational costs alone of Tri-State's legacy coal fleet [7,8]; and furthermore, the economic development and jobs associated with locally-produced renewable energy will become increasingly apparent to more of the member co-ops. Tri-State's rigid position is not sustainable.

Section 2 of this filing provides a well-referenced review of the following topics:

- Sources of dissatisfaction with Tri-State, including: contract length; cap on local generation; high costs; and governance structure.
- Solutions that some co-ops have tried (with limited success): buy out the contract; use PURPA to develop local energy; and work within Tri-State to effect change.
- The economics of Tri-State's generation fleet, and several approaches that would allow Tri-State to provide all of its members with cheaper and cleaner electricity.

Section 3 of this filing explores two important questions concerning the perplexing observation that Tri-State – a nonprofit that claims to exist for the benefit of its member co-ops – acts in a hostile manner rather than a "cooperative" manner toward its more forward-looking members.

QUESTION 1: Why would Tri-State block member co-ops that want to pursue cheaper and cleaner electricity without shifting costs onto other members? What are Tri-State's underlying motivations?

QUESTION 2: Why are any of the distribution co-ops, much less a controlling majority, willing to charge their own customer-members high prices for dirty electricity rather than follow the lead of Kit Carson, DMEA, LPEA, United Power etc., that are instead fighting for the interests of their customer-members as one might expect?

Two state statutes enacted during the 2019 Legislative session concern PUC oversight of Tri-State **[9]**: the PUC Sunset/Reauthorization bill (SB19-236)³, and the Climate Action Plan to Reduce Pollution (HB19-1261)⁴. The former statute requires Tri-State to participate in the Electric Resource Planning process and to submit "*a Resource Plan that meets the energy policy goals of the state.*" The latter statute strengthens state energy policy goals by requiring large utilities to reduce carbon

³ SB19-236 (Sunset Public Utilities Commission). "PUC Reauthorization bill."
<https://leg.colorado.gov/bills/sb19-236>

⁴ HB19-1261 (Climate Action Plan to Reduce Pollution).
<https://leg.colorado.gov/bills/hb19-1261>

emissions 80% by 2030 relative to 2005 levels. Tri-State will soon be required to provide cost-effective clean energy to all of its members, and therefore Tri-State would be well advised to modify its business model sooner rather than later in order to repair member relations and avoid further defections and a less bright future. A broad Commission ruling could help motivate this coming evolution.

2. CONTEXT – BACKGROUND ON TRI-STATE AND ITS MEMBER CO-OPS

Although Tri-State is governed by its member co-ops, the individual co-ops have little ability to control their energy sources and wholesale electricity costs due to Tri-State's restrictive contracts and its governance structure. Reasons for dissatisfaction with Tri-State by some of its member co-ops include **[10,11,4]**:

- Contract length. Tri-State contracts are 40-50 years long, tying co-ops to a single wholesale supplier with agreements that seemed good at the time, but have become onerous as alternatives have gotten both cheaper and cleaner. The present dissatisfaction began in 2005 when Tri-State proposed to build a new coal-fired generation plant in Kansas, and wanted member co-ops to extend their contracts from 40 years to 50 years to pay for it (Kit Carson and DMEA refused) **[4]**. Tri-State finally gave up on building the new coal plant, but it is shedding its other coal generation far too slowly for some members' liking.
- Cap on local generation. Tri-State's "all requirements" contract restricts local electricity generation by any member co-op to 5% of its peak load. As of late 2017, four co-ops had reached the cap and four more were near the cap **[10]**. This limitation is frustrating to some members because local renewable generation is cheaper, cleaner, incurs no transmission charges, supports local economic development and jobs, and keeps energy dollars circulating in the local economy.
- High costs. The price of Tri-State's wholesale power is approximately 7.5 cents per kilowatt-hour (kWh), which is much higher than the current western wholesale market price of about 3.1 cents/kWh, and much higher than the 4.5 cents/kWh that

Granby-based Mountain Parks Electric negotiated for solar electricity [11]. Tri-State's high price reflects the high fuel and operational costs of its legacy coal fleet [7,8], at a time when Xcel Energy is contracting for competitively-procured wind energy at less than 2 cents/kWh, and dispatchable solar-plus-storage at 3.6 cents/kWh [4]. Tri-State's prices have gone from being the lowest in the state a decade ago, to now being substantially higher than all other suppliers, including investor-owned utilities, wholesale markets, and renewable energy Power Purchase Agreements [12, slide 3].

- Governance structure and voting power. Tri-State is composed of a few large co-ops and many small co-ops, yet each co-op gets one vote on the Tri-State Board. Three large Colorado co-ops (which have reached the 5% self-generation cap) have 152,000 customer-members and 3 votes on the Board, while the 22 smallest co-ops with a total of only 103,000 customer-members have 22 votes and therefore a majority on the 43-member Board. It is difficult to change the status quo because Tri-State is effectively ruled by the smaller co-ops, which have prevented policy changes that would allow more local energy development by the co-ops that want it and that serve many more customers [4]. The Tri-State voting apportionment has been compared to the design of the U.S. Senate, but with no U.S. House to balance decision-making with a factor that represents population. There is also an inter-state component, where 66% of the Tri-State customer base lives in Colorado, but the Colorado co-ops have only 43% of the votes on the Board [10, see chart].

Tension between the Tri-State Board and some of its member co-ops arises from an inherent conflict: Tri-State has a duty to provide its members with the lowest-cost service, but the lowest-cost resources these days are competitively-procured local generation and/or wholesale market purchases, not Tri-State's legacy fossil fuel generation.

Several member co-ops have pursued their energy goals anyway, in several ways (but with limited success):

- Buy out the contract. Kit Carson co-op set the precedent of buying out their Tri-State contract and choosing a different wholesale electricity supplier. Kit Carson terminated its contract with Tri-State by negotiated agreement in 2016, in pursuit of stable low-cost clean energy after experiencing 10 rate increases over the previous 13 years. The buyout involved paying Tri-State a \$37 million exit fee that prevented cost-shifts onto the remaining co-ops. Kit Carson then entered into a 10-year Power Purchase Agreement with Guzman Energy. Guzman is building solar arrays across Kit Carson territory, and the co-op is buying that power at a fixed price. The new contract also gives Kit Carson the freedom to develop local renewable energy. Guzman paid the exit fee, and Kit Carson is paying Guzman back over six years, off their books, using savings from lower energy costs. Kit Carson is now insulated from the risk of rate increases associated with Tri-State's coal-heavy generation, and will save \$50-70 million over the 10-year contract with Guzman. Kit Carson is aiming to self-produce 100 percent of its daytime electricity needs by 2022. **[4,5,6]**
- Use PURPA to develop local energy. DMEA challenged Tri-State's 5% cap on locally-produced electricity with the argument that the federal PURPA law supersedes Tri-State's "all requirements" contract. The Public Utility Regulatory Policies Act of 1978 (PURPA) **[13]** was an early step toward breaking monopoly utility control over electricity generation, by requiring utilities to purchase electricity from any small power producer that can provide power at a price equal to or slightly above the utility's "avoided cost" for electricity. The Federal Energy Regulatory Commission (FERC) upheld the challenge, allowing DMEA to procure power from Independent Power Producers through PURPA **[14,15]**. This ruling allows all 905 electric co-ops and 830 municipal electric utilities in the nation to procure cost-competitive local power through PURPA. However, the viability of this approach is still waiting on another Tri-State appeal and a rehearing at FERC. Frustrated once again, DMEA went a different direction, and in October 2018 DMEA's customer-members passed a measure allowing the co-op to issue stock to finance a Tri-State exit, similar to the Kit Carson approach but using a different financing mechanism **[16,17]**.

- Petition Tri-State to raise the 5% cap. La Plata Electric Association (LPEA), in southwestern Colorado, had competitive races for open Board seats in a 2017 election, and the campaign largely centered on increasing renewable energy. The LPEA Board voted to approach Tri-State about increasing the cap on local renewable energy production to 10% [18]. The resolution to raise the cap was voted down by the Tri-State Board [11]. Pressure to lift the 5% cap will likely increase as more member co-ops reach the cap, and as the cost of local renewable energy continues to decline. In January 2018, the LPEA Board voted to study alternatives to Tri-State after receiving a petition signed by 1000 people and 100 businesses calling for 100% renewable electricity and more local generation [4].
- Petition Tri-State for a "partial-requirements contract". United Power has contacted the other Tri-State member co-ops to express "grave concerns" about its power supply, and to propose a potential solution. United Power borders Xcel Energy territory and therefore competes for new businesses with a territory that has wholesale electricity prices that are 28% lower than Tri-State's [2]. This challenge to attracting (or keeping) businesses that want low cost and/or cleaner electricity will increasingly affect economic development in all communities served by Tri-State. United Power has proposed an amendment to Tri-State's bylaws that allows for a "partial-requirements contract" that permits greater than 5% local generation and some amount of access to lower cost power, while keeping all members financially whole [19]. The current situation has already cost the economy of United Power's territory a new data center, because the customer insisted on access to low-cost renewable energy which United Power cannot provide under its Tri-State contract [3]. The City of Montrose, the largest city in DMEA's service territory, has also expressed to the Commission the importance of lower and more stable rates for local economic development and jobs in their community⁵.

⁵ City of Montrose filing in this docket in support of DMEA's position.
https://www.dora.state.co.us/pls/efi/efi.show_document?p_dms_document_id=906313&p_session_id=

- Deploy battery storage to use purchased electricity more effectively [20]. United Power has installed a battery storage system to store electricity purchased from Tri-State for later use, with the aim of shaving peak demand and thereby reducing costs. This was not storage paired with a solar array, because United Power had already reached the 5% cap; instead, United was time-shifting electricity purchased from Tri-State. Tri-State reacted by changing its bylaws to discourage the future use of batteries by all of its members, and to prevent the use of batteries by members who have already reached or are near the 5% cap. The new bylaw counts stored energy as generated energy and therefore includes it under the 5% cap, even though stored energy is not generated energy, and the stored energy was even purchased from Tri-State.

Tri-State's rigid enforcement of contracts that require members to continue paying high prices for dirty energy for the next 20-30 years risks ever-increasing dissatisfaction and defection of member co-ops as:

1. the price of Tri-State's coal-heavy power continues to increase relative to new renewable energy and energy storage, and/or market purchases; and
2. Tri-State alienates more members with punitive measures like the battery storage change to its bylaws, and the unjust and unreasonable treatment of DMEA; and
3. more and more member co-ops realize that they are acting against the interests of their own customer-members by supporting Tri-State's position and tactics; and
4. state laws evolve to further support the renewable energy transition, and increase PUC oversight of Tri-State, as occurred during the 2019 legislative session.

A recent Rocky Mountain Institute (RMI) report analyzed the economics of replacing Tri-State's coal-fired generation with renewable energy and energy storage, and found that Tri-State could provide cleaner electricity to all of its members at a lower cost than the status quo [7,8,21]. Therefore, Tri-State has at least one viable path to stem the irreversible defection of member co-ops, if it chooses to act soon enough and aggressively enough.

Specifically, the RMI report found that:

- Tri-State's coal assets are expensive to operate. Tri-State members could save \$600 million through 2030 by replacing its fleet of coal generators with renewable energy and energy storage.
- A supply mix based on renewable generation and market purchases, rather than legacy coal assets, would reduce the risk of rate increases by 30-60 percent while maintaining system reliability. The risk factors include: increased self-generation by members; more members exiting Tri-State; and future greenhouse gas pricing (which was implemented for resource planning purposes in the 2019 legislative session).
- Examples are given of IOUs, co-ops, and municipal utilities that are acting now to transition away from legacy generation assets cost-effectively by taking advantage of low renewable energy costs, currently available tax incentives, and low interest rates to finance new projects.
- Tri-State could facilitate a least-cost system solution that benefits all members by adopting a strategy of collective action, regionally-appropriate solutions, and group buying power, as opposed to individual co-ops pursuing solutions on their own.

The RMI report is consistent with other findings that many western coal plants are uneconomic to operate, and that ratepayers would save money if these plants were retired and replaced with renewable energy plus energy storage [22,23]. Xcel Energy received astonishingly low bids for wind, solar and energy storage to replace two Colorado coal plants [24,25].

Guzman Energy recently made an innovative proposal to Tri-State that would address the calls by some members for cheaper and more stable rates, and cleaner, more locally-produced electricity [26]. Guzman would purchase 3 Tri-State coal plants and a coal mine, and then shut them down and replace that capacity with a mix of wind

and solar energy firmed with natural gas. The transaction would lead to lower electricity prices for Tri-State members because the operating cost of the coal plants is higher than the all-in cost of new replacement renewable resources. The economics of this proposal are more favorable the sooner Tri-State acts on it, due to impending reductions in federal tax credits that are available for the replacement resources.

On a larger scale, Community Energy Inc. commissioned Vibrant Clean Energy to conduct a detailed power system and economic modeling study that assessed 3 scenarios for all of Colorado's coal plants: 1) continue operating them as now through 2040; 2) gradually close them by 2030 and replace the capacity with 70+% solar and wind energy firmed by natural gas; and 3) complete the transition from coal by 2025. The study finds that replacing all coal generation in Colorado by 2025 could save ratepayers \$2.5 billion in net present value through 2040, while reducing today's carbon emissions by more than half, and substantially increasing net employment in the electricity sector **[27,28]**.

The Vibrant Clean Energy study, the RMI study, and the Guzman proposal all show that transitioning off of coal as soon as possible would reduce rates while advancing state energy goals, as is already clear to DMEA and other member co-ops.

3. TWO POINTED QUESTIONS FOR TRI-STATE AND ITS MEMBERS

The preceding section provided evidence that:

1. member co-ops could have cheaper, cleaner electricity, and more local economic development and jobs, if they weren't rigidly bound by their Tri-State contracts; and
2. Tri-State could choose to evolve with the changing times and provide its members with cheaper and cleaner electricity by replacing its legacy coal fleet with primarily renewable energy, energy storage, and market purchases.

So, why don't they? Isn't Tri-State supposed to be concerned about the welfare of its member co-ops? Aren't the member co-ops, who have the authority to vote for change at Tri-State, concerned with the interests of their own customer-members?

Digging into these perplexing questions seems relevant to this proceeding, not only because illogical behavior begs greater understanding, but also because insight into underlying motivations may assist the Commission in crafting a remedy for DMEA that also speaks to the future and sends appropriate messages to Tri-State, and possibly establishes a template for other member co-ops that seek to exit on fair terms. These perplexing questions are elaborated below.

QUESTION 1: Why would Tri-State block member co-ops that want to pursue cheaper and cleaner electricity without shifting costs onto other members? What are Tri-State's underlying motivations?

Tri-State is a nonprofit, which theoretically exists for the benefit of its members, where "benefit" means whatever its members want. In the case of DMEA (and Kit Carson, LPEA, United Power, etc.), "benefit" means lower costs and/or cleaner energy sources and/or more local generation and innovation. As the RMI report and the Vibrant Clean Energy study show, and as Guzman Energy has demonstrated with Kit Carson, Tri-State could provide all of its members with cheaper and cleaner electricity if it so chose. Opposition might be more understandable if it came from Xcel Energy,

which has shareholder interests to serve and a monopoly to protect, but Tri-State is a nonprofit that exists to serve its members. So why don't they serve their members better by proactively developing cheaper and cleaner energy sources?

The Boards of the member co-ops would be well advised to seriously question why Tri-State would act against their interests, when it has viable options to pursue a path that could provide them with cheaper, cleaner, more locally-produced electricity.

QUESTION 2: Why are any of the distribution co-ops, much less a controlling majority, willing to charge their own customer-members high prices for dirty electricity rather than follow the lead of Kit Carson, DMEA, LPEA, United Power etc., that are instead fighting to protect the interests of their customer-members as one might expect?

Why aren't all of the member co-ops clamoring for cheaper, cleaner, local energy development, when evidence indicates that this is both possible and would be beneficial to their interests? Isn't that contrary to their mandate? Why don't the customer-members of those co-ops vote for more forward-looking Board members? Two possibilities come to mind:

- Lack of facts. It is mostly the larger co-ops that are seeking solutions and change, with representatives of the smaller co-ops on Tri-State's Board that are standing in their way. The larger co-ops presumably have more resources at their disposal, especially personnel and expertise, which they have used to study and understand that alternatives to high-cost dirty energy exist. Small co-ops do not have the resources and expertise to stay on top of the rapidly changing energy landscape. Many of the smaller co-ops may not be aware that over the last decade, Tri-State's prices have gone from being the lowest in the state to now being substantially higher than all other wholesale suppliers **[12, slide 3]**. Hopefully, the Boards of the member co-ops will find the information in this filing enlightening, and will dig into some of the references, and perhaps direct their representative on Tri-State's Board to shift to DMEA's side, because it is in their own self-interest to do so.

- Misinformation from Tri-State. One consequence of the smaller co-ops lacking the resources to do their own research and become experts on energy markets, is that they may rely heavily on information and perspectives provided to them by Tri-State Management and Staff. Those Staff may have presented scenarios aimed at manipulating the smaller co-ops into adopting a view that a DMEA exit would harm them. If misinformation is a factor, then the situation on Tri-State's Board could shift quite rapidly when more members learn that they've been misled by those they trusted.

Boards of the member co-ops would be well advised to seriously question why they would continue to support Tri-State's position when there is much evidence that it is detrimental to their own customer-members, who presumably would prefer cheaper, cleaner, more locally-produced electricity and the associated economic development and jobs, if they understood that this was a viable option. Perhaps the most powerful evidence that member co-ops are not getting the best deal from Tri-State (in addition to the fact that Kit Carson is doing quite well with Guzman), is simply that the larger co-ops that have the resources to fully investigate current energy markets have done so, and they have concluded that they want change or they want out.

CONCLUSION

This filing is intended to present context and background on the relationship between Tri-State and its members, for consideration by the Commission as well as by the Board of Tri-State and the Boards of the members co-ops. Greater understanding of the underlying dissatisfaction of some members may help identify a remedy for DMEA that is broad enough to be useful by other member co-ops, and possibly send a message to Tri-State that there are viable paths forward at this time when the changing energy landscape seems to require an evolution of their position and business model. In the absence of a broad ruling, this matter is likely to end up before the PUC again in the near future.

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